

REMARKS

Claims 11 and 12 have been amended. Claims 11-15 and 109-114 remain pending in the application. Applicant reserves the right to pursue the original and other claims in this and other applications. Applicant respectfully requests reconsideration in view of the above amendments and the following remarks.

Claims 11-15 and 109-114 stand rejected under 35 U.S.C. § 102(e), as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,449,239 (Uno). The rejections are respectfully traversed.

Claim 11 has been amended to indicate that the “silver material [is] in physical contact with the chalcogenide material.” Similarly, claim 12 has been amended to indicate the “metal material [is] in physical contact with the chalcogenide material.” Uno does not disclose, teach or suggest these elements.

The previous Office Action characterized Uno’s recording layer 204 and reflective layer 107 as the chalcogenide material and silver/metal materials of claims 11 and 12. Office Action mailed 7/2/2007 at page 2. Even assuming that characterization were correct, which it is not, Uno’s reflective layer 107 is not “in physical contact with” recording layer 204. On the contrary, Uno’s recording layer 204 is separated from reflective layer 107 by interface layer 203, protective layer 202, separating layer 109 and thermal diffusion layer 108. Uno, FIG. 8; col. 11, lns. 27-45. Therefore, Uno does not disclose, teach or suggest the “silver [or metal] material [is] in contact with the chalcogenide material.”

Claim 11 is not obvious over Uno, either. It would not have been obvious to remove all of the interspaced layers of Uno to place reflective layer 107 “in physical contact with” recording layer 204. In fact, doing so would render Uno inoperable for its intended purpose, and where “[a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” MPEP §2143.01. Uno is directed to dual-layer optical disk technology. Each of the layers—

interface layer 203, protective layer 202, separating layer 109 and thermal diffusion layer 108—has a distinct and important purpose. Uno, col. 11, lns. 27-63. For instance, separating layer 109 is provided to specifically “separate the first medium 101 and second medium 201” and is required “to have a thickness ... so that in recording and reproduction of one medium, crosstalk from the other medium can be suppressed to such a small degree as to be neglected.” Uno, col. 11, lns. 45-63. Removing this layer, for instance, renders Uno inoperable as recording and reproduction would be impossible due to crosstalk. Therefore, claims 11 and 12 are not obvious over Uno. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 11, 111 and 114 stand rejected under 35 U.S.C § 103(a) as unpatentable over admitted prior art (APA) in view of U.S. Patent 4,809,044 (Pryor) or Uno. The rejections are respectfully traversed.

None of Uno, Pryor, or the APA, even when considered in combination, discloses, teaches or suggests that the “barrier material [would be] on and in physical contact with the silver [or metal] material ... [and] being a same material as the chalcogenide material and being essentially transparent to ultraviolet radiation,” as recited in claim 11. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 11, 12, 110-114 stand rejected under 35 U.S.C § 102(e) as anticipated or, in the alternative, under 35 U.S.C § 103(a) as unpatentable over Kozicki U.S. Patent Publication 2002/0168820 (Kozicki). The rejections are respectfully traversed.

Like independent claim 11, as amended, independent claim 12 recites, among other elements, a “chalcogenide barrier material on and in physical contact with the metal material, the barrier material being a same material as the chalcogenide material and being essentially transparent to ultraviolet radiation.” Kozicki fails to disclose, teach or suggest at least these elements.

Kozicki teaches programmable microelectronic structures including electrodes 120 and 130, an ion conductor 140 and buffer or barrier layer 155 on the ion conductor 140. Kozicki’s ion

conductor may be germanium selenide glass. Kozicki at ¶ 60. The buffer or barrier layer 155 can be a variety of materials, including oxides or a transition metal sulfide or selenide. Kozicki does not disclose, teach or suggest that the barrier or buffer layer 155 is or could be a same material as the ion conductor 140. For at least these reasons, withdrawal of these rejections is respectfully requested.

Claims 11, 12, 110-114 stand rejected under 35 U.S.C § 102(e) as anticipated or, in the alternative, under 35 U.S.C § 103(a) as unpatentable over Moore U.S. Patent Publication 2002/0106849 (Moore). The rejections are respectfully traversed.

Moore teaches a non-volatile resistance variable device including chalcogenide material 22, a metal 24 on the chalcogenide material. A conductive electrode 26 is over the chalcogenide material and dielectric layer 32 is formed over the device. The Office Action states that electrode 26 and/or dielectric layer 32 are equivalent to the barrier material of the present claims. However, Moore does not disclose, teach or suggest that electrode 26 and/or dielectric layer 32 are or could be the same material as the chalcogenide material 22. For at least these reasons, withdrawal of these rejections is respectfully requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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